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10/530,110	10/28/2005	Richard Norman Johnson	9062-000167/US/USB	2872

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HARNESS, DICKEY, & PIERCE, P.L.C
7700 BONHOMME, STE 400
ST. LOUIS, MO 63105

EXAMINER	
MILLER HARRIS, AMBER R	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/530,110	JOHNSON ET AL.	
	Examiner	Art Unit	
	Amber Miller-Harris	1709	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04/01/2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 refers to "the electrically absorptive *layer*", wherein no said layer appears within the either claim 1, or claim 2. Claim 6 is dependent on claim 5, therefore inherits the deficiency of claim 5.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4, 7, 8, 10-13, 19-21, 28-30, and 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruffoni US 5,151,222 in view of Hedrick et al. US 5,506,047.

For claim 1, the Ruffoni reference discloses a device with electromagnetic-energy absorptive characteristics, the device comprising a porous substrate, and an electrically absorptive material applied to the porous substrate wherein the electrically absorptive material is distributed substantially uniformly through the porous substrate (column 1, lines 45-55). The reference does not disclose the device being an air filter.

The Hedrick et al. reference discloses the device being an air filter (column 1, lines 61-65).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include the device being an air filter (Hedrick et al, column 1, lines 61-65) because this allows EMI filters to act as a grounding interface between mating features of enclosures used to house a printed

circuit board or similar devices, as well as filter air entering and leaving the computer housing.

For claim 2, the Ruffoni reference discloses the electrically absorptive material comprising an electrical absorber and a binding agent (column 1, lines 51-55).

For claim 3, the Ruffoni reference discloses the electrical absorber being selected from the group consisting of carbon, carbon particles, carbon fibers, alumina, sapphire, silica, titanium dioxide, ferrite, iron, iron silicide, graphite, and composites of iron, nickel and copper (column 1, lines 51-55).

For claim 4, the Ruffoni reference discloses the binding agent being selected from the group consisting of an elastomer, a rubber and an epoxy (column 1, lines 51-55).

For claim 7, the Ruffoni reference discloses a fire-retardant layer (column 4, lines 11-15).

For claim 8, the Ruffoni reference discloses the fire-retardant layer comprising a fire retardant selected from the group consisting of phosphates and antimony trioxide (column 4, lines 11-15).

For claim 10, the Ruffoni reference discloses the porous substrate comprising an open-cell reticulated polyurethane foam (column 1, lines 45-50).

For claim 11, the Ruffoni reference discloses the foam comprising at least about 10 pores per linear inch (column 2, lines 40-43).

For claim 12 the Ruffoni reference does not explicitly state the porous substrate comprising a fiberglass mat. The reference does state "The reticulated foam substrate

16 employed according to the invention is a light weight, flexible, reticulated polyurethane foam formed by exploding bubbles of the foam material, using large open cells within a skeleton structure of fibers, similar to a *fiber mat*". Therefore to a person having ordinary skill in the art at the time the invention was made would have modified the Ruffoni reference to include the porous substrate comprising a fiberglass mat, because the reference recognizes that the, reticulated polyurethane foam and fiber mat are equivalents.

For claim 13 the Ruffoni reference does not disclose the porous substrate comprising a non-woven polyester web.

The Hedrick et al. reference discloses the porous substrate comprising a non-woven polyester web (column 8, lines 37-40).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include the porous substrate comprising a non-woven polyester web (Hedrick et al, column 8, lines 37-40) because it has excellent air flow characteristics.

For claim 19 the Ruffoni reference does not discloses the porous substrate comprising a sheet having a thickness less than about .05 inches.

The Hedrick et al. reference discloses the porous substrate comprising a sheet having a thickness less than about 0.5 inches (column 8, lines 37-41).

It would have been obvious to one have having ordinary skill in he art at the time invention was made to have modified the Ruffoni reference to discloses the porous substrate comprising a sheet having a thickness less than about 0.5 inches (Hedrick et

al. column 8, lines 37-41) because the thinner thickness allows air to pass through, but not larger contaminants.

For claim 20, the Ruffoni reference discloses the porous substrate provides at least 20dB of attenuation to electromagnetic energy substantially occurring at frequencies at least between about 4 GHz and 18 GHz (column 4, lines 6-10).

For claim 21 the Ruffoni reference discloses a method for producing a device having electromagnetic-energy-absorptive characteristics comprising the steps of, providing a porous substrate having a fist side and a second side, and applying an electrically absorptive solution to the porous substrate, wherein the electrically absorptive solution is distributed substantially uniformly through the porous substrate (column 3, lines 21-35). The reference does not disclose the device being an air filter.

The Hedrick et al. reference discloses the device being an air filter (column 1, lines 61-65).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include the device being an air filter (Hedrick et al, column 1, lines 61-65) because this allows EMI filters to act as a grounding interface between mating features of enclosures used to house a printed circuit board or similar devices, as well as filter air entering and leaving the computer housing.

For claim 28, the Ruffoni reference discloses the step of applying an electrically absorptive solution being repeated (column 3, lines 15-20).

For claim 29, the Ruffoni reference discloses the step of applying a fire-retardant layer (column 4, lines 11-14).

For claim 30, the Ruffoni reference discloses the fire-retardant layer comprising a fire retardant selected from the group consisting of phosphates and antimony trioxide (column 4, lines 11-14).

For claim 33, the Ruffoni reference does not disclose the airflow characteristics of the porous substrate being substantially equivalent before and after the application of the electrically absorptive solution.

The Hedrick et al. reference discloses "excellent air flow characteristics" of the porous substrate (column 1, lines 60-65). So although it does not explicitly state the airflow characteristics of the porous substrate being substantially equivalent before and after the application of the electrically absorptive solution, it would be obvious that excellent airflow characteristics would equate to the airflow characteristics of the porous substrate being substantially equivalent before and after the application of the electrically absorptive solution.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include the airflow characteristics of the porous substrate being substantially equivalent before and after the application of the electrically absorptive solution (column 1, lines 60-65) because this allows air to flow freely through the substrate and not cause undue pressure on the first side of the substrate.

For claim 34, the Ruffoni reference does not disclose a reduction in air-flow capacity of the porous substrate when compared before and after the application of the electrically absorptive solution is preferably less than 25%.

The Hedrick et al. reference discloses "excellent air flow characteristics" of the porous substrate (column 1, lines 60-65). So although it does not explicitly state a reduction in air-flow capacity of the porous substrate when compared before and after the application of the electrically absorptive solution is preferably less than 25%, it would be obvious that excellent air flow characteristics would equate to a reduction in air-flow capacity of the porous substrate when compared before and after the application of the electrically absorptive solution is preferably less than 25%.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include a reduction in air-flow capacity of the porous substrate when compared before and after the application of the electrically absorptive solution is preferably less than 25% (column 1, lines 60-65) because this allows air to flow freely through the substrate and not cause undue pressure on the first side of the substrate.

For claim 35, the Ruffoni reference does not disclose a reduction in air-flow capacity of the porous substrate when compared before and after the application of the electrically absorptive solution is preferably less than 15%.

The Hedrick et al. reference discloses "excellent air flow characteristics" of the porous substrate (column 1, lines 60-65). So although it does not explicitly state a reduction in air-flow capacity of the porous substrate when compared before and after

the application of the electrically absorptive solution is preferably less than 15%, it would be obvious that excellent air flow characteristics would equate to a reduction in air-flow capacity of the porous substrate when compared before and after the application of the electrically absorptive solution is preferably less than 15%.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include a reduction in air-flow capacity of the porous substrate when compared before and after the application of the electrically absorptive solution is preferably less than 15% (column 1, lines 60-65) because this allows air to flow freely through the substrate and not cause undue pressure on the first side of the substrate.

For claim 36, the Ruffoni reference does not disclose a reduction in airflow capacity of the porous substrate when compared before and after the application of the electrically absorptive solution is preferably less than 10%.

The Hedrick et al. reference discloses "excellent air flow characteristics" of the porous substrate (column 1, lines 60-65). So although it does not explicitly state a reduction in air-flow capacity of the porous substrate when compared before and after the application of the electrically absorptive solution is preferably less than 10%, it would be obvious that excellent air flow characteristics would equate to a reduction in air-flow capacity of the porous substrate when compared before and after the application of the electrically absorptive solution is preferably less than 10%.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include a reduction in air-

flow capacity of the porous substrate when compared before and after the application of the electrically absorptive solution is preferably less than 10% (column 1, lines 60-65) because this allows air to flow freely through the substrate and not cause undue pressure on the first side of the substrate.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ruffoni US 5,151,222 in view of Hedrick et al. US 5,506,047 as applied to claim 7 above, and further in view of van Haaster et al. US 7,135,643 B2.

For claim 9, the Ruffoni reference does not disclose the fire-retardant-treated porous substrate passing a self-extinguishing vertical burn requirement in accordance with Underwriters Laboratories Standard 94.

The van Haaster et al. reference discloses the fire-retardant-treated porous substrate passing a self-extinguishing vertical burn requirement in accordance with Underwriters Laboratories Standard 94 (column 6, lines 24-31).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include the fire-retardant-treated porous substrate passing a self-extinguishing vertical burn requirement in accordance with Underwriters Laboratories Standard 94 (van Haaster et al, column 6, lines 24-31) in order to meet stringent flammability standards.

Claims 5, 6, 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruffoni US 5,151,222 in view of Hedrick et al. US 5,506,047 as applied to claim 1 above, and further in view of van Haaster et al. US 7,135,643 B2.

Regarding claim 5, the Ruffoni reference does not disclose the electrically absorptive layer further comprising a highly conductive material.

The van Haaster et al. reference discloses the electrically absorptive layer further comprising a highly conductive material (column 7, lines 14-19).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include the electrically absorptive layer further comprising a highly conductive material (van Haaster et al, column 7, lines 14-19), in order to increase the amount of EMI efficiency.

Regarding claim 6, the Ruffoni reference does not disclose the highly conductive material being selected from the group consisting of copper and aluminum.

The van Haaster et al. reference discloses the highly conductive material being selected from the group consisting of copper and aluminum (column 7, lines 14-19).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include the highly conductive material being selected from the group consisting of copper and aluminum (van Haaster et al, column 7, lines 14-19), in order to increase the amount of EMI efficiency.

For claim 14, the Ruffoni reference does not disclose an electrically conductive layer.

The van Haaster et al. reference discloses an electrically conductive layer (column 7, lines 14-19).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include an electrically conductive layer (van Haaster et al, column 7, lines 14-19), in order to increase the amount of EMI efficiency.

For claim 18, the Ruffoni reference does not disclose the structure further comprising a frame fixedly attached to the porous substrate, wherein the frame provides physical support for the porous substrate.

The van Haaster et al. reference discloses further comprising a frame fixedly attached to the porous substrate, wherein the frame provides physical support for the porous substrate (column 10, lines 1-10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include further comprising a frame fixedly attached to the porous substrate, wherein the frame provides physical support for the porous substrate (van Haaster et al, column 10, lines 1-10) because this allows the structure to be mounted to places that need EMI shielding.

Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruffoni US 5,151,222 in view of Hedrick et al. US 5,506,047 and van Haaster et al. US 7,135,643 B2 as applied to claim 14 above, and further in view of Lambert et al. US 6,870,092.

Regarding claim 15, the Ruffoni reference does not disclose the electrically conductive layer being an electrical conductor having an array of apertures through which air can flow.

The Lambert et al. reference discloses the electrically conductive layer being an electrical conductor having an array of apertures through which air can flow (column 2, lines 1-9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include the electrically conductive layer being an electrical conductor having an array of apertures through which air can flow (Lambert et al, column 2, lines 1-9) because this allows for placement over a vent, therefore assuring there are no EMI leaking points.

Regarding claim 16, the Ruffoni reference does not disclose the electrically conductive layer being a conductive coating applied thereto.

The Lambert et al. reference discloses the electrically conductive layer being a conductive coating applied thereto (column 2, lines 42-47) because this also enhances corrosion resistance.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include the electrically conductive layer being a conductive coating applied thereto (Lambert et al, column 2, lines 42-47) because this also enhances corrosion resistance.

For claim 17, the Ruffoni does not disclose the electrically conductive layer comprises a honeycomb.

The Lambert et al. reference discloses the electrically conductive layer comprises a honeycomb column 2, lines 55-58).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include the electrically conductive layer comprises a honeycomb (Lambert et al, column 2, lines 55-58) because the honeycomb can capture EMII emissions.

Claims 22-27, 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruffoni US 5,151,222 in view of Hedrick et al. US 5,506,047 as applied to claim 21 above, and further in view of Clough et al. US 5,633,081.

Regarding claim 22 the Ruffoni reference discloses the applying step comprises the sub-steps off providing an electrically absorptive solution comprising an electrical absorber and a binding agent (column 1, lines 45-55) and curing the electrically absorptive solution (column 3, lines 39-41). The reference does not disclose immersing the porous substrate into the electrically absorptive solution, causing the electrically absorptive solution to penetrate the porous substrate, extracting the immersed porous substrate from the electrically absorptive solution and removing excess electrically absorptive solution from the extracted porous substrate, thereby leaving a substantially uniform distribution of electrically absorptive solution through the porous substrate.

The Clough et al. reference discloses immersing the porous substrate into the electrically absorptive solution, causing the electrically absorptive solution to penetrate the porous substrate, extracting the immersed porous substrate from the electrically absorptive solution and removing excess electrically absorptive solution from the extracted porous substrate, thereby leaving a substantially uniform distribution of electrically absorptive solution through the porous substrate (column 37 lines 10-19).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include immersing the porous substrate into the electrically absorptive solution, causing the electrically absorptive solution to penetrate the porous substrate, extracting the immersed porous substrate from the electrically absorptive solution and removing excess electrically absorptive solution from the extracted porous substrate, thereby leaving a substantially uniform distribution of electrically absorptive solution through the porous substrate (Clough et al. column 37 lines 10-19). The Clough et al. reference discloses "dipping" the porous substrate within the solution, to one having ordinary skill in the art this would also be considered immersing the porous substrate within the solution, and removing it from the solution as well. This process will ensure that there is a substantially uniform distribution of the mixture along the porous structure.

For claim 23, the Ruffoni reference discloses the electrical absorber being selected from the group consisting of carbon, carbon particles, carbon fibers, alumina, sapphire, silica, titanium dioxide, ferrite, iron, iron silicide, graphite, and composites of iron, nickel and copper (column 1, lines 45-50).

For claim 24, the Ruffoni reference discloses the binding agent being selected from the group consisting of an elastomer, a rubber and an epoxy (column 1, lines 45-50)

For claim 25 the Ruffoni reference does not disclose the step of forcing air through the porous material during at least one of prior to curing and curing, thereby ensuring that pores remain substantially unblocked.

The Clough et al. reference discloses the step of forcing air through the porous material during at least one of prior to curing and curing, thereby ensuring that pores remain substantially unblocked (column 37 lines 10-15).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include (column 37 lines 10-15) because this allows the pores within the porous material to be cleared of the solution.

For claim 26, the Ruffoni reference does not disclose the step of forcing air through the porous material comprising drawing a vacuum.

The Clough et al. reference discloses the step of forcing air through the porous material comprising drawing a vacuum (column 37 lines 10-15).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include the step of forcing air through the porous material comprising drawing a vacuum (Clough et al column 37 lines 10-15) because this allows the pores within the porous material to be cleared of the solution.

For claim 27, the Ruffoni reference does not disclose the step of removing electrically absorptive solution comprising squeezing the extracted porous substrate.

The Clough et al. reference discloses the step of removing electrically absorptive solution comprising squeezing the extracted porous substrate (column 37, lines 10-15).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include the step of

removing electrically absorptive solution comprising squeezing the extracted porous substrate (Clough et al column 37 lines 10-15) because this will ensure that there is a substantially uniform distribution of the mixture along the porous structure.

For claim 31, the Ruffoni reference discloses the applying step comprising, providing an electrically absorptive solution comprising an electrical absorber and a binding agent (column 1, lines 45-55), spraying the electrically absorptive solution onto the first side of the porous substrate (column 2, lines 35-40) and curing the electrically absorptive solution (column 3, lines 39-41). The reference does not disclose removing excess electrically absorptive solution from the sprayed, porous substrate, thereby leaving a substantially uniform distribution of electrically absorptive solution through the porous substrate.

The Clough et al. reference discloses removing excess electrically absorptive solution from the sprayed, porous substrate, thereby leaving a substantially uniform distribution of electrically absorptive solution through the porous substrate (column 37, lines 10-15).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include removing excess electrically absorptive solution from the sprayed, porous substrate, thereby leaving a substantially uniform distribution of electrically absorptive solution through the porous substrate (Clough et al column 37 lines 10-15) because this will ensure that there is a substantially uniform distribution of the mixture along the porous structure.

For claim 32, the Ruffoni reference does not discloses one side of the porous substrate being sprayed with the electrically absorptive solution, but the reference does not disclose the second side of the porous substrate being sprayed the electrically absorptive solution.

The Clough et al. reference discloses the act of the distribution of the mixture on the substrate by being sprayed, as well as being dipped (column 37, lines 10-15). Dipping the substrate into the solution would indicate that both sides of the substrate are being covered. So, it would be obvious that the spraying of the substrate would therefore be on both sides of the substrate as well to achieve the same desired result.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the Ruffoni reference to include the step of spraying the electrically absorptive solution onto the second side of the porous substrate (Clough et al. column 37, lines 10-15) because this allows the maximum amount of solution to absorb into the substrate therefore a more efficient dielectric gradient layer.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amber Miller-Harris whose telephone number is (571) 272-3149. The examiner can normally be reached on Mon-Thur (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on (571) 272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Walter D. Griffin

WALTER D. GRIFFIN
SUPERVISORY PATENT EXAMINER

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